

SYED MUSAAB SAMI

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SUMMARY

Fresh Software Engineering graduate and Full-Stack AI Engineer with hands-on experience in AI-integrated web applications, computer vision, object detection, person re-identification, RAG systems, REST APIs, authentication, and full-stack dashboards using Next.js, NestJS, FastAPI, PostgreSQL, and Python-based ML tools.

EDUCATION

BS Software Engineering, FAST NUCES Islamabad

2022 – 2026

Relevant Coursework: Data Structures, Database Systems, Operating Systems, Applied AI, Computer Networks, Web Engineering, NLP, Software Project Management.

SKILLS

Languages Python, JavaScript, TypeScript, Java, .NET

Full Stack React, Next.js, Tailwind CSS, Node.js, Express.js, NestJS, FastAPI, REST APIs, JWT, RBAC

Databases PostgreSQL, MongoDB

AI/ML PyTorch, TensorFlow, Hugging Face, OpenAI API, LangChain, RAG, OpenCV, YOLO, MediaPipe, FAISS, Torchreid

Tools Git, Docker, Postman, Linux, Kaggle, Jupyter Notebook, WebSockets, RTSP

EXPERIENCE

Full-Stack Intern

Jun 2025 – Aug 2025

Periegesis

Remote

- Developed full-stack modules using Next.js, NestJS, and PostgreSQL across frontend and backend workflows.
- Built responsive UI components, routing/state management, REST APIs, JWT authentication, RBAC authorization, security handling, and API performance improvements.

Machine Learning Intern

Jun 2024 – Aug 2024

Neural Lines

Remote

- Prepared multilingual bank receipt data through annotation, cleaning, preprocessing, visualization, and reporting.
- Trained and evaluated machine learning models using Python, NumPy, Pandas, Scikit-learn, and Jupyter Notebook.

PROJECTS

- **SecureVision: Computer Vision-Powered Surveillance System.** Led AI/ML development for a surveillance system detecting shoplifting, loitering, pickpocketing, cash skimming, crowd density, and crowd flow from CCTV/video streams. Trained YOLO-based workflows using PyTorch, OpenCV, TensorFlow, MediaPipe, and custom datasets. Implemented person re-identification using Torchreid trained on Market-1501 with FAISS-based similarity search, integrated with alert dashboard, evidence gallery, RTSP, WebSocket alerts, Google OAuth, and 2FA.
- **ICU SOP Detection System.** Trained a YOLOv11s model on a custom-labeled dataset to detect ICU safety equipment including masks, gloves, gowns, and shoe covers.
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- **Gaze-Scroll: Hands-Free Cursor Control.** Built a Python-based hands-free cursor control system using webcam-based eye tracking with MediaPipe Face Mesh, OpenCV, PyAutoGUI, and ScreenInfo. Implemented real-time iris landmark tracking, gaze normalization, smoothing, neutral gaze calibration, dead-zone filtering, velocity-based cursor movement, and debug controls for stable cursor navigation without external hardware. ““
- **AuditLens AI.** Built an AI-powered receipt intelligence platform using Next.js, React, TypeScript, Supabase/PostgreSQL, Prisma, Gemini API, REST APIs, and authenticated user-specific document workflows for receipt extraction, analytics, and financial QA.

LEADERSHIP

Head of Information and Coordination, Software Engineering Society, FAST NUCES Islamabad

Managed communication, coordination, task updates, and information flow between society members and internal teams.